receiver coil said guided wave and any reflected signals in said pipe or tube through said coupled thin ferromagnetic strip, said reflected signals including any caused by said anomalies in said pipe or tube; and determining if said reflected signals were due to said anomalies that should not exist in said pipe or tube, wherein the improvement comprises:

said thin ferromagnetic strip being made from an iron-cobalt alloy.

2. (Original) The method for nondestructive inspection of said pipe or tube for anomalies therein using magnetostrictive techniques of claim 1 wherein in said inducing step of said residual magnetization is in a lengthwise direction of said thin ferromagnetic strip and said guided wave is a torsional wave.

3. (Original) The method for nondestructive inspection of said pipe or tube for anomalies therein using magnetostrictive techniques of claim 1 wherein in said inducing step of said residual magnetization is in a widthwise direction of said thin ferromagnetic strip and said guided wave is a longitudinal wave.

4. (Original) The method for nondestructive inspection of said pipe or tube using magnetostrictive techniques of claim 2 wherein there are two of said thin ferromagnetic strips, a first of said thin ferromagnetic strips being adjacent said transmitting coil and a second of said thin ferromagnetic strips being adjacent said receiving coil.

5. (Original) The method for nondestructive inspection of said pipe or tube using magnetostrictive techniques of claim 1 wherein said iron-cobalt alloy comprises at least 40% by weight of cobalt and at least 40% by weight of iron.

6. (Original) In an apparatus for the nondestructive inspection of a pipe or tube for anomalies therein, which anomalies indicate defects such as notches, cuts, cracks, wear or corrosion, using magnetostrictive techniques, of the type wherein at least one thin ferromagnetic strip has residual magnetization therein, said thin ferromagnetic strip being circumferentially

pressed against said pipe or tube; a transmitter coil is located adjacent said thin ferromagnetic strip; a receiver coil is located adjacent said thin ferromagnetic strip; a transmitter control circuit is connected to said transmitter coil for generating a pulse signal and delivering said pulse signal to said transmitter coil, said transmitter coil creating magnetostrictively a guided wave that is coupled from said thin ferromagnetic strip to said pipe or tube to propagate along the length of said pipe or tube; wherein said receiver magnetostrictively detects said guided wave and any reflected signals, including any caused by said anomalies in said pipe or tube; and said transmitter coil and said receiver coil are wound adjacent said thin ferromagnetic strip so that said guided wave moves perpendicular thereto, wherein the improvement comprises:

said thin ferromagnetic strip being made from an iron-cobalt alloy.

7. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 6 wherein said residual magnetization is in a lengthwise direction of said thin ferromagnetic strip and said guided wave is a torsional wave.

8. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 6 wherein said residual magnetization is in a widthwise direction of said thin ferromagnetic strip and said guided wave is a longitudinal wave.

9. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 8 wherein there are two of said ferromagnetic strips, a first of said thin ferromagnetic strips being adjacent said transmitting coil and a second of said thin ferromagnetic strips being adjacent said receiving coil.

10. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein as given in claim 9 wherein an expansion device inside said pipe or tube circumferentially presses said thin ferromagnetic strip against said pipe or tube.

11. (Original) The apparatus for the nondestructive inspection of said pipe or tube for

anomalies therein as given in claim 9 further includes a pressing device for pressing said first and second thin ferromagnetic strips in a circumferential direction against the outside of said pipe or tube.

12. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein as given in claim 6 wherein said iron-cobalt alloy comprises at least 40% by weight of cobalt and at least 40% by weight of iron.

13. (Original) A method for nondestructive inspection of a pipe or tube for anomalies therein, which anomalies can indicate defects such as notches, cuts, cracks, wear or corrosion, using magnetostrictive techniques, said method comprising the following steps:

inducing residual magnetization in at least one thin iron-cobalt alloy strip;

circumferentially pressing said thin iron-cobalt alloy strip against said pipe or tube;

first locating a transmitter coil adjacent said thin iron-cobalt alloy strip;

second locating a receiver coil adjacent said thin iron-cobalt alloy strip;

generating a pulse signal in a transmitter control circuit and delivering said pulse signal to said transmitter coil, said transmitter coil creating magnetostrictively a guided wave in said thin iron-cobalt alloy strip, said thin iron-cobalt alloy strip being coupled to said pipe or tube so that said guided wave propagates along the length of said pipe or tube;

magnetostrictively detecting by said receiver coil said guided wave and any reflected signals in said pipe or tube through said coupled thin iron-cobalt alloy strip, said reflected signals including any caused by said anomalies in said pipe or tube and said signal amplitude of said reflected signals being at least four times greater than with coupled nickel strips; and

determining if said reflected signals were due to said anomalies that should not exist in said pipe or tube.

14. (Original) The method for nondestructive inspection of said pipe or tube for anomalies

therein using magnetostrictive techniques of claim 13 wherein in said inducing step of said residual magnetization is in a lengthwise direction of said thin iron-cobalt alloy strip and said guided wave is a torsional wave.

15. (Original) The method for nondestructive inspection of said pipe or tube for anomalies therein using magnetostrictive techniques of claim 13 wherein in said inducing step of said residual magnetization is in a widthwise direction of said thin iron-cobalt alloy strip and said guided wave is a longitudinal wave.

16. (Original) The method for nondestructive inspection of said pipe or tube using magnetostrictive techniques of claim 14 wherein there are two of said thin iron-cobalt alloy strip, a first of said thin iron-cobalt alloy strip being adjacent said transmitting coil and a second of said thin iron-cobalt alloy strip being adjacent said receiving coil.

17. (Original) An apparatus for the nondestructive inspection of a pipe or tube for anomalies therein, which anomalies indicate defects such as notches, cuts, cracks, wear or corrosion, using magnetostrictive techniques, said apparatus comprising:

at least one thin iron-cobalt alloy strip that has residual magnetization therein, said thin iron-cobalt alloy strip being circumferentially pressed against said pipe or tube;

a transmitter coil located adjacent said thin iron-cobalt alloy strip;

a receiver coil located adjacent said thin iron-cobalt alloy strip;

a transmitter control circuit connected to said transmitter coil for generating a pulse signal and delivering said pulse signal to said transmitter coil, said transmitter coil creating magnetostrictively a guided wave that is coupled from said thin iron-cobalt alloy strip to said pipe or tube to propagate along the length of said pipe or tube;

said receiver magnetostrictively detecting said guided wave and any reflected signals, including any caused by said anomalies in said pipe or tube, said signal amplitude of said

reflected signals being at least four times greater than with coupled nickel strips;

said transmitter coil and said receiver coil being wound adjacent said thin iron-cobalt alloy strip so that said guided wave moves perpendicular thereto.

18. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 17 wherein said residual magnetization is in a lengthwise direction of said thin iron-cobalt alloy strip and said guided wave is a torsional wave.

19. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 17 wherein said residual magnetization is in a widthwise direction of said thin iron-cobalt alloy strip and said guided wave is a longitudinal wave.

20. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein of claim 18 wherein there are two of said thin iron-cobalt alloy strip, a first of said thin iron-cobalt alloy strip being adjacent said transmitting coil and a second of said thin iron-cobalt alloy strip being adjacent said receiving coil.

21. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein as given in claim 20 wherein an expansion device inside said pipe or tube circumferentially presses said thin iron-cobalt alloy strip against said pipe or tube.

22. (Original) The apparatus for the nondestructive inspection of said pipe or tube for anomalies therein as given in claim 19 further includes a pressing device for pressing said first and second thin iron-cobalt alloy strips in a circumferential direction against the outside of said pipe or tube.